



Trail Design Guidelines



City of San José - Department of Parks, Recreation and Neighborhood Services – Trail Program

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Purpose

The City of San José seeks to develop a 100-mile trail network to serve the recreational and commuting needs of residents and visitors. The City also seeks to be a national leader in trail development. Adherence to these design guidelines will ensure that trails meet functional and aesthetic objectives, provide common and familiar infrastructure, and serve as a model for other agencies to follow.

Related Documents

The Trail Design Guidelines have been influenced by a number of existing documents. The following offer greater level of guidance in some areas. If there is a conflict in the documents, the Director will determine which is to be used and will ensure that an update of the Guidelines is prepared.

City of San José

- Riparian Guideline Policy Document
- Police Department-CPTED (Crime Prevention through Environmental Design)¹
- Public Art along Trails Master Plan
- Municipal Code, Section 13.44.030
- Department of Public Works – Standard Specifications and Details

County of Santa Clara

- Trail Design Guidelines

Santa Clara Valley Water District

- Coyote Watershed Aesthetic Guidelines
- Watershed Trail Design Guidelines

State of California

- Caltrans Bikeway Manual, Chapter 1000
- Levee Encroachment, Guide for Vegetation on Projects Levees
- Interim Guide for Vegetation on Flood Control Levees
- Department of Transportation, Specification No. 8010-004 (Specification for Glass Spheres/Beads) pertaining to striping

FHWA

- Equestrian Guidelines

Army Corp of Engineers

- Corps' Engineering Manual 11110-2-301, "Guidelines for Landscape

¹ Incorporated throughout this document

Plantings on Floodwalls, levees, and Embankment Dams”

Amending Guidelines

This guideline document has been approved by Director of Parks, Recreation and Neighborhood Services. The City of San José Municipal Code, Section 13.44.030 authorizes the Director to adopt rules and regulations governing the public’s use of city parks and trails.

From time to time, the guidelines may need to be updated. The Director shall be made aware of changes to the document and authorize the revision. The latest version of the guideline document will be posted on the Trail Program website with a brief summary of any substantial changes.

Trail Types

There are three classes of bikeways identified by the California Highway Design Manual:

Class	Description
I	Trails & Paths a. Separated Trail b. Multi-Use Sidewalk
II	Bike Lanes (striped)
III	Bike Routes

San José’s Trail Network is composed of interconnected Class I trails. The City designates its trails based on the adjacent environment:

Designation No.	Trail Type	Description
1	Riparian	Along rivers and creeks
2	Utility	Within a corridor otherwise reserved for public utilities, in some instances, these types of facilities are called Parkways due to their landscaping
3	Railway	Within a corridor formerly used for rail transport
4	Highway	Along, but physically divided from a highway facility
5	Interim	Along an unpaved, hard-packed gravel surface, may include characteristics of types 1, 2 or 3
6	Parkway	Along a roadway, may include characteristics of types 1, 2, or 3



Trails designated as 1, 2 and 3 generally meander within landscaped (native or planted) areas, often allowing users to meander along the route, serving both recreational and commute users.

Trails designated as 4 generally do not include a landscaped element and proximity to the highway makes it predominantly a commute serving facility.

Trails designated as 5 are facilities with only minimum improvements to allow public access for recreation and commuting. Opening of such facilities is generally to provide continuity to a fully developed trail system and is seen as a short-term solution until further development occurs.

Trail designated as 6 are facilities along a roadway but is differentiated by sidewalk because of the following elements:

- No more than 2 driveway intersections over a 1 block distance
- Minimum 10' wide pavement, standard 12' with hard-packed gravel shoulders is preferable.
- Bordered on both sides by 10' of landscaping
- Independent of sidewalk that serves adjacent developments.
- Special pavement reinforces that facility is for pedestrian and bicyclists as it traverses through roadway intersections.
- Continuous over at least 3 blocks and linking to an off-street trail (of the other designations noted).
- Pavement may be either PCC or AC.

Parkway – bordered by landscaping, minimal interface with other land uses.	Not a Parkway – urban street scene with no defined facility for bicycling.
	

Primary and Secondary Trail Systems

Like a highway system, San José's Trail Network has primary trails systems that carry high volumes of traffic, extend significant distances or link to regional systems outside of the City's boundaries. Secondary systems feed into the primary systems offering neighborhood access. The distinction between primary and secondary is useful in determining priorities for development; with primary systems being typically the highest priority when all factors are equal.

Primary Trail Systems	Secondary Trail Systems	
Bay Trail	Albertson Parkway	Highway 87 Bikeway
Coyote Creek Trail	Almaden Park	Lake Cunningham Park

Guadalupe Creek	Berryessa Creek	Montgomery Hill
Guadalupe River Trail	Burbank Rail Trail	Penitencia Creek
Los Alamitos Creek	Calero Creek	River Oaks Pathway
Los Gatos Creek	Canoas Creek	Ryland Parkway
	Component Trail	Saratoga Creek
	Coyote Alamitos Canal	Silver Creek, Lower North
	Edenvale	Silver Creek (Barberry Lane)
	Fisher Creek	Silver Creek (Umbarger Road)
	Five Wounds	Silver Creek Valley
	Evergreen Creek	Thompson Creek
	Fowler Creek	Yerba Buena Creek
	Hetch-Hetchy Parkway	Willow Glen Spur
	Highway 237 Bikeway	

Operation

Trail Rules

The following rules apply to all trail users. In most instances, the trail rules are posted at the trailheads to all trail systems.

All other posted rules	Supporting Muni Code section, local, state or federal law	Posted on Sign?
Trail is open 1 hour before sunrise to 1 hour after sunset.		Yes
Trail is open 24 hours per day when in compliance with all State-required safety equipment.	Commuters are defined as bicyclists wearing helmet and riding bicycle equipped with lighting and reflectors ² as mandated by the State of California Vehicle Code Section 21201(d), and be traveling purposely along the trail.	No
Minors must wear helmets	California Vehicle Code (CVC) 21212(a)	No
Bicyclists must yield to pedestrians and obey all traffic regulations.		
No fires, alcohol, or smoking.		
No motorized vehicles (except motorized wheelchairs).		

² White headlight, red tail reflector, white or yellow pedal or foot reflectors, and white or yellow wheel reflectors. These are required at night on any “bikeway” as defined in Streets & Highways 890.4, which includes Class I facilities.

No Boating, rafting, fishing or swimming.		
Picnicking allowed only in designated areas.		
Clean up after pets.		
Dogs must be on a leash and under control at all times. Violators are subject to citation.	SJMC 7.08.590	Yes
All other San José Municipal Code and state laws shall apply to our trails.		Yes

Access

Trails are open to the public and designed to accommodate pedestrians/runners, bicyclists, and skaters. Some trails are designed to also accommodate equestrian usage.

Allowable Closures

Trails remain open and accessible with two exceptions:

- A special event limits or prevents access. Signage and website posting is required per the Trail Closure Policy.
- Weather or tides may flood under-crossings. Signage is posted in advance of under-crossings and trail users should seek alternative routes.

Equestrian

Guidelines to support equestrian usage of trails are primarily for the safety of all users. An unpaved surface is required for safe travel by equestrian riders and their horses. A paved trail can be an unyielding surface that is very hard on the horse's legs and can be very slippery. For this reason, not all trails in the Trail Network are suitable.

San José has and continues to use Federal-aid transportation funds for trail development. As a result, all equestrian and other non-motorized recreational uses may be allowed on shared use paths and trails developed with such funding.

NOTE: Federal transportation laws and regulations do not prohibit the use of shared use paths or trails by equestrians, in-line skaters, cross country skiers, snowshoe users, or other non-motorized users. States may choose to prohibit

The following trails permit equestrian usage and the table below indicates design standards for all future trail or improvement projects.

- Coyote Creek Trail (from Highway 237 to Yerba Buena Avenue). Refer to County rules for portions of trail beyond San José's boundary.
- Los Alamitos Creek Trail

- Penitencia Creek Trail

Solution	Use	Design
Separated trails; paved for bikes, hikers and unpaved for equestrian	To be installed when high pedestrian usage (___/day) is anticipated.	Paved trail will meet standard trail guideline. Equestrian trail shall be 5' wide and paved in native material or compacted base rock. Signage should indicate that equestrian usage is permitted.
Parallel paved and unpaved trail (Standard trail design)	To be installed when occasional equestrian use is anticipated.	Minimum should width of 2'. One shoulder may provide an optimum of 5' width of native material or compacted base rock for equestrian use. Signage should indicate that equestrian usage is permitted.
Entirely paved trail	To be installed when site is constrained and no equestrian use is anticipated.	Paved trail.

Educational signage should be posted along equestrian trails to educate the public about safe travel near horses. At a minimum, signage will explain who has the right of way and how to safely approach or pass a horse and rider.

Compliance with ADA

The Americans with Disabilities Act does not offer guidance on trail construction. However, the City seeks to design trails in the spirit of the law and in compliance with applicable guidelines whenever feasible. For these reasons, trails meet the following design guidelines (greater detail on these and other guidelines is provided under :

Attribute	Guideline	Related guideline document
Width	Spacing between bollards or other obstructions shall be 5' minimum.	Caltrans Highway Design Manual
Cross Slope	Slope shall be 3% maximum.	City of San José, Standard Specifications
Ramp Slope	5% is preferred. No more than 8.33% when resting points are provided ever '.	Consistent with ADA guidance
Surface	PCC, ACC or stable hard-packed gravel	

Objectives

Aesthetic

These guidelines specify high-quality, common elements for use along all trail systems. The design of new trails should make use of these elements in a manner that enhances the trail experience.

Functional

San José seeks to develop an interconnected network of trail systems. The collection of individual trail systems can meet recreational and commute objectives, and simplify maintenance by achieving the following objectives:

For Recreation and Commuting

- Align with, or guide trail users to public restrooms, retail, housing, employment and points of interest.
- Include aesthetic design elements and lead to superior destinations when a trail is short in length or along a less than desirable feature (highway, industrial development, etc.)
- Provide relatively direct alignments to support commuting.
- Provide access to a variety of natural and manmade sites to encourage recreation.
- Link neighborhood to recreational facilities, parks, and employment, retail, businesses, entertainment, education, etc.
- Align trail to provide at least 100' of visibility at all points
- Provide interesting features to draw more people to the trail (interpretive signage, signage to points of interest, viewing areas, etc.)

For Maintenance Workers

- If not through access between arterial roadways, provide vehicle turn around point at 100' increments. Provide space for a 100' radius turning movement.

For Public Safety

Ultimately the best way to increase personal security on trails is to increase the number of users. The presence of other users on a trail tends to make all trail users feel more secure.

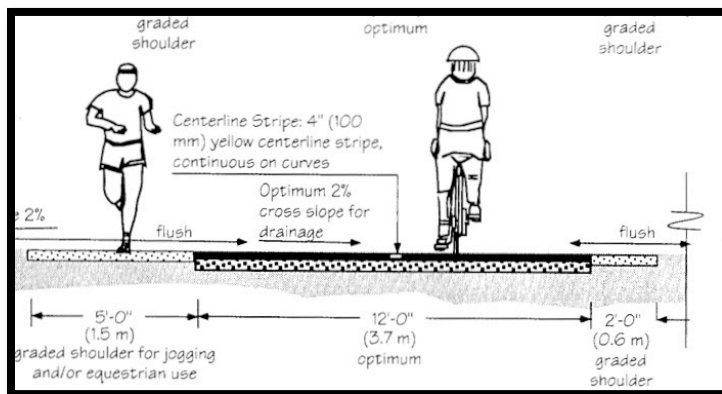
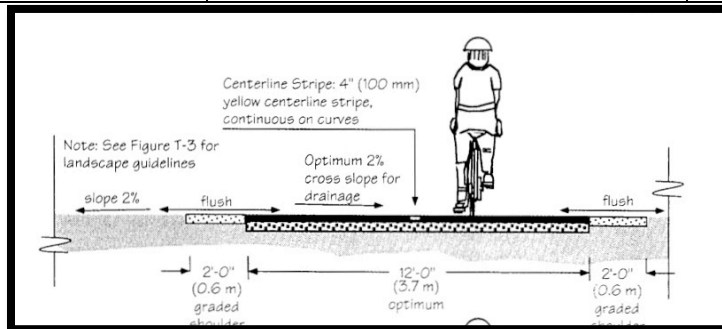
- Homes and business should be orientated to offer views of trails.
- Maximize visibility of the trail from arterial roadways when possible.
- Post signage with typical safety notices for dips, bends and other potential challenges with an alignment.
- Offer amenities and features as a means to increase usage and discourage illegal behavior.
- There should be no “box canyons,” areas where the trail corridor is fully enclosed by dense vegetation, walls backs of buildings, or other barriers.

Infrastructure

These guidelines provided detailed information on the installation of common infrastructure along the trail network.

Pavement

Element	Design (Optimum)	Design (Minimum)
Width	12' with two 2' soft shoulders	8' minimum and no shoulders if lack of right of way
Slope	3%, draining towards waterway	
Incline	5%	8.33% for short distance, with ___ intermittent rest areas at ___ intervals



Bollards

Preventing unauthorized vehicular access is important to enhance public safety. Bollards and gates can accomplish the task, but must be designed in a manner that allows all authorized agencies and emergency services personnel to gain safe and quick access. San Jose permits a number of options to control access at trail heads.

Multi-Agency Bollard

- Bollards should use reflective materials for visibility.
- Bollards should be removable to permit multi-agency access.
- A loop along the bollard accommodates for a daisy chain system of locks permitting multiple agencies to gain access. The loop handle on the bollard keeps the daisy chain from lying on the pavement causing a trip hazard to trail users and also intended for ease of bollard removal. **Product Specification:**

Swing-Arm Gate

- A swing arm gate is preferable when sufficient width exists and there is a regular need to access the trail while preventing illegal entry. It reduces the potential for worker injury and permits more rapid entry for emergency service vehicles.
- **Product Specification:**

Flexible Bollard

- The Caltrans Type Q delineator shall be used at locations where frequent maintenance access is required.
- **Product Specification:**

Removable Bollard

- A type ___ will be installed with a standard Parks key when no access to other agencies is required.
- **Product Specification:**

Guadalupe River Park Bollard

- A unique bollard is used in the park, from Highway 280 to Highway 880. The Schedule 40 steel bollard has a 4" nominal diameter, 3' high, dome cap filled with concrete, powder coated, and directly buried in 2'6" x 1'4" diameter concrete.
- **Product Specification:**

Product	Local Distributor
Timber Form Furniture / Columbia Cascade 1975 SW Fifth Avenue Portland, OR 97201 TEL (800) 547-1950 ext 580 www.timberform.com	David O'Keefe Co. P.O. Box 457 Alamo, CA 94507 Contact- Michael Stralka TEL (510) 558-0140

Bridges

- Pedestrian/bicycle bridges should be 12' minimum width.
- Vehicle loaded bridges may be required in some applications.
- Provide architectural elements at bridge footings to reflect local architecture.
- **Product Specification:**

Bridge Under-Crossings

- Provide trail continuity with under-crossings at roadways.
- The optimum clearance is 12' (and 14' for anticipated equestrian uses). In instances where the bridge is low in comparison to regular water level, the clearance may be reduce to 8'.
- Clearances less than the minimum at under-crossings, should have advance signage and signs posted on the structure to indicate the maximum height.
- Do not install below the 10-year flood level.
- Provide lighting with no fade at all locations. The fixture should be housed in

- vandal-proof housing. The fixture should be a 55W QL induction lamp with an initial lumen rating of about 3500 lumens is to be used for under-crossings.
- Pave with PCC to reduce deterioration from periodic flooding.

Call Boxes

- Installed near trail gateways/entries and generally at 1 mile intervals.
- Located in a clearly visible location (both from trail and roadway).
- Numbered and referenced in the system-wide map and reported to the Police Department GIS group.
- Numbered, clearly marked hands-free emergency phone/call boxes should be located at regular intervals along the trail, (1/3rd mile intervals recommended in more remote areas where trail access can be gained from nearby roads, parking lots, etc.)
- Provide precise call box location to assigned maintenance staff to incorporate in regularly scheduled inspections of the Call Box inventory.
- **Product Specification:**

Drinking Fountains

- Drinking fountains should be positioned in a recessed area away from the trail's flow of traffic.
- Ideally, adjacent parks will offer drinking fountains. Signage along trails should direct users to these facilities.
- **Product Specification:**

Fencing & Railing

- Install railing where reaction zones are inadequate or less than safe.
- Within existing neighborhoods, trails developed along the back of homes should include tubular steel fencing in order to permit views of the trail. (Property owner may wish to maintain existing fencing behind tubular steel fencing). Install fence on property line and consistent with policies regarding “gift of public funds”.
- Install fencing to prevent access into sensitive riparian planting areas.
- The City does not provide permission for private parties to access trails through individual gates. Why?
- **Product Specification:** Fencing shall be [redacted]. Railing shall be [redacted].

Fitness Stations

- Fitness stations should be located where natural surveillance is maximized, such as near trail entry/exit points or within clearings in the landscape.
- Stations should be spaced at approximately ¼ mile when a program of related exercises is being encouraged.
- **Product Specification:** Fitness stations shall be [redacted].

Furnishings

Benches

- Benches should be located where natural surveillance is maximized, such as near trail entry/exit points or within clearings in the landscape.
- Benches should be designed in a manner to prevent skateboarding and other non-desired activities. Placement of the bench away from a paved surface may help to address the issue.
- Benches should be selected to deter long-term occupancy. Backless benches or mid-point armrests should be considered as well as short 4' benches or arm chair variants.
- Benches should be deployed at regular intervals (1/2 mile is optimum) so that persons may have frequent opportunities to rest. Additional benches may be interspersed or grouped dependent upon observed need or to create a focal point. Need should guide placement and frequency as determined by the Operations Manager for existing trails and the Trail Manager for planning documents.
- Benches should be placed in close proximity to the trail – typically 3' from the gravel or paved shoulder. Benches may be set back further if situated to take advantage of a view, but should be clearly accessible by a spur path to minimize the potential for pioneer trails within the environment.
- Benches may be situated away from the trail if part of a paved interpretive station or other special-function activity area.

Product Specification:

Project Name:	No. 2119-8-SJ <i>Restoration</i> Bench with Intermediate Armrest
Description:	8' long with armrest, Bench frames shall be cast iron
Manufacturer:	Columbia Cascade Company, 1975 SW Fifth Avenue, Portland, OR 97201-5293 U.S.A. Local Representative: David F. O'Keefe Co., Phone: 925/837-4440.
Specification:	Cast in accordance with ASTM, Specification A48-82, Class 30, and shall include integrally cast City logo. Stretcher pipe shall be 1 inch i.d. schedule 40 mild steel seamless pipe. Center support strap shall be 2-inch wide x .25-inch thick formed mild steel strap.
Wood:	All wood shall be Marine Teak, precision milled to pattern, dressed to a smooth finish with eased edges and ends, individually selected for quality and appearance. Alaska yellow cedar option shall be used as an alternative to the teak.
Construction:	Bench frames shall have all parting lines and flask marks ground smooth after casting. Stretcher pipe and center support strap shall be deburred and ground smooth. Bench slats shall be attached to cast iron frames and center support strap with No. 10 x 1-1/4 inch stainless steel pan head screws.
Finish:	Steel and cast iron parts shall be coated No. 6012 Federal Green with CASPAX-7™, a tough, opaque, UV resistant exterior grade polyester powder coating applied to a minimum thickness of 6 mils. Liquid,

epoxy or lead-containing powder coatings are not acceptable.
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Trash Receptacles

- A trash receptacle shall be installed at each trailhead.
- The receptacle shall be designed in manner that makes graffiti and vandalism difficult.
- **Product Specification:** Type 508 unit (Outdoor Creations, Inc. or equivalent)

Gateway

Install a gateway element at major arterial roadways or at locations where a trail would be visually hard to detect. Gateways are either vertical, with stone-clad columns and fencing. They offer a visual element that can be viewed from some distance. In instances where a column is not suitable, a compass element can be installed at the trail entry point. It serves a dual purpose of helping trail users to orientate themselves. Where space permits, both elements may be used.

- Gateway should include the trail's name and reflect local architecture through use of materials or colors.
- Building materials should complement the natural character of the trail and riparian area.
- Use special pavement at entry points to increase visibility of the trail.

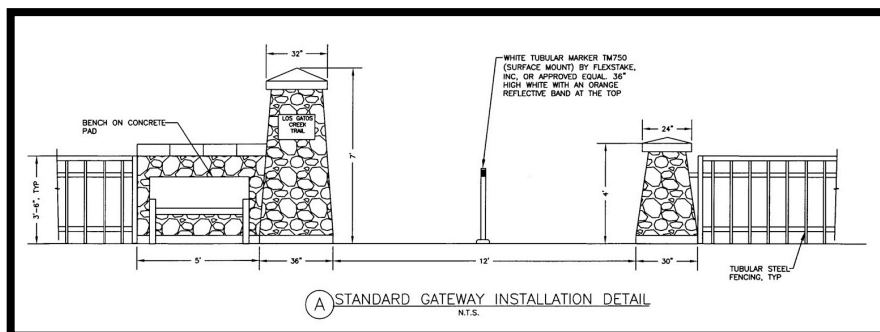


Figure 1 - Vertical Gateway Element

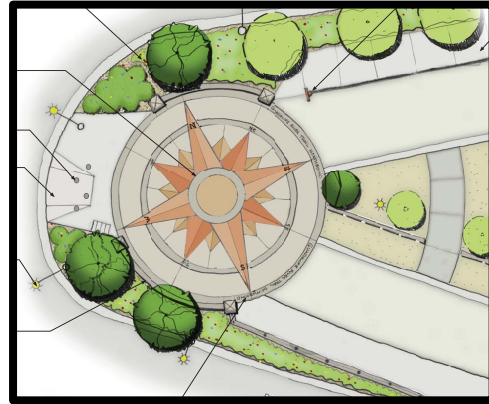


Figure 2 - Compass Gateway Element

Intersecting Trails

- Align crossing with a signalized intersection
- If trail must cross at a mid-block location, include additional street lighting and advance signage, possibly striped crosswalk.
- Mid-block trail crossings should include special pavement surfaces to visually reinforce the existing of the trail.
- At-grade street crossings should have Caltrans-approved advanced signage to notify drivers of the presence of drivers and pedestrians.
- A paved “node” as shown will designate the intersection of two trail systems. Landscaping is optional and dependent upon nearby irrigation from park or other public facility.

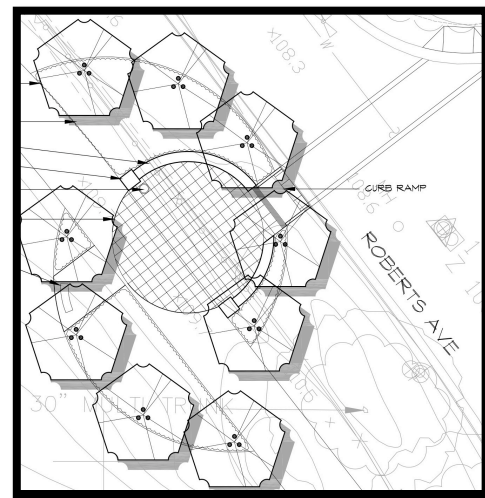


Figure 3 - Circular Trail Intersection

Landscaping

Enhancement

- Provide tree cover when feasible.
- Deciduous trees should be used where possible along trail to maximize natural illumination of the trail.
- Select landscape materials with low growth habit.
- Vegetation is not permitted upon levee side slopes and possibly within 15' of the levee base (pending Army Corp guidelines). These areas must remain clear to permit inspections, not impair flood management and reduce potential damage from fallen trees.

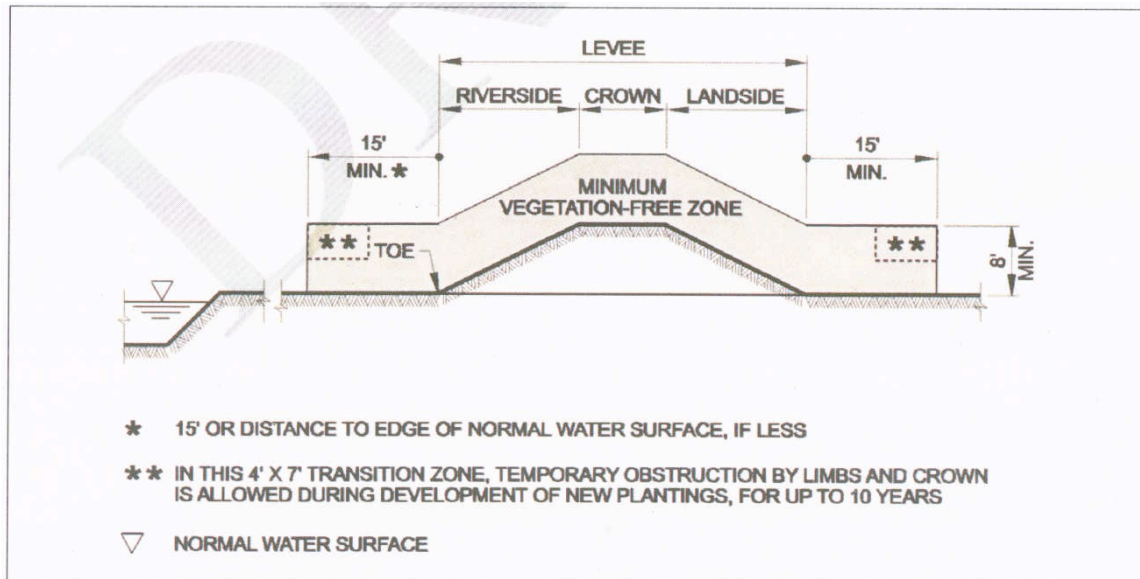


Figure __: Landscape Guidance for Levees (DRAFT – Army Corp Guidelines)

- Irrigation system cutoff valves need to be at least 10 feet or more away from the levee toe as to not interfere with ingress and egress of the easement along the levee toe. The cutoff valves should be clearly marked with a stake or sign to indicate their locations to levee maintenance personnel.
- Plantings on the levee should be limited to species that do not inhibit inspection and access to the levee or inhibit potential flood fighting.
- Trees are normally not allowed to except on the landside of overbuilt levees on berms adjacent to the levee.
- Any bushes should be of low or medium height.

Landscaping and Public Safety

- Landscaping offering concealment should be avoided.
- Tree canopies should be maintained at a minimum of seven feet in height.
- Bushes/shrubbery directly along trail should be planted in clumps and should not exceed 42 inches in height.
- Vegetation shall not be within 5' of pavement edge.
- Create a buffer zone of 10-15' from the trail surface. This area should be clear of tall grass or landscaping to prevent concealment.
- There should be no spaces along trail corridor that are fully enclosed by dense vegetation, walls, backs of buildings, or other physical and/or visual barriers.
- Likewise, landscaping offering concealment should be curtailed or maintained in a safety conscious manner in the following area: Any raised portion of land that offers visibility to long portions of the trail from a secluded segment near a main road.
- There should be a buffer zone along the trail where tall grass or landscaping that could possibly conceal a person, is away from the trail at least fifteen feet to allow reaction time and/or time for someone to yell for help if necessary.

- Fast growing drought resistant vine such as Boston Ivy, (deciduous/changes color) or Creeping fig Ivy, (evergreen) should be grown on concrete supports and retaining walls along and near the trail to increase aesthetics and discourage graffiti.
- The landscape plan must address user safety and security. The design needs to create both genuine security as well as perceived security. Start with good visibility, trail users should have at least 100 feet of both forward and rear visibility on a level grade. Sight distances are particularly important at approaches to tunnels, bridge underpasses, and intersections. The users should be able to see all the way through before entering the area.
- The trail design should provide occasional “escape routes” – ways to retreat from any problems. There should be no “box canyons,” areas where the trail corridor is fully enclosed by dense vegetation or other barriers.

Mitigation

- Plant native plantings within riparian areas. Meet all requirements noted in the Riparian Guideline Policy Document and all anticipated permitting conditions.

Memorials

- Memorials shall not to be installed along the defined trail corridor (typically 20' wide pathway) but will also include all adjacent public open space that is not designated as an active park space. Trail corridors are typically narrow and have fewer resources devoted for maintenance, creating an environment that is not suitable for sustainable memorials. Additionally, all trails are master planned and optimum placement of benches defined.
- Trails developed upon Santa Clara Valley Water Districts shall not be the site for memorials of any kind per district policy.
- Trails developed upon other agency lands shall be limited by memorial provisions in applicable joint use agreements. If no language exists, memorials are not to be installed.
- Persons seeking a memorial site may consider available parkland as governed by the Department's Memorial Policy. The maintenance of memorial installations developed upon suitable parkland will be accompanied by an lifetime endowment for maintenance and preservation.

Mutt Mitts

- Mutt mitts shall be installed at trail heads.
- **Product Specification:**

Picnic Areas

- Picnic areas may be installed along trails where adequate width is available and when underlying property is owned by the City of San Jose.
- **Product Specification:**

Ramps

Wheelchair Ramps

- A standard wheelchair ramp shall be installed in instances where a trail head

- aligns with a crosswalk and no vehicle access is required.
- Sufficient space between the ramp and bollard shall be provide as to not limit access.
- **Product Specification:** Refer to City’s Standard Specifications and Details.

Vehicle Access Ramps

- **Product Specification:** Refer to City of San Jose Standard Specifications.

Curb Ramp

- A chamfered curb shall be used in instances where a maintenance vehicle ramp may be confused as a public access driveway.
- **Product Specification:** Refer to image and City of San Jose Standard Specifications.

Levee Ramps

- Intermediate and informal paths along levees (pioneer trails) are strictly prohibited due to the damage they may cause to a levee structure. Damage occurs from erosion during runoff due to winter rainstorms.
- Identification of unofficial access points along levees shall be brought immediately to the attention of the Santa Clara Valley Water District. The District issues a Notice of Violation to the property owner if it can be confirm that they are the responsible party.

Ramps: Levees

- Ramp structures may be installed leading to levee trails when there are no nearby trailheads or a trail system intersects.
- The ramping structure shall be developed only upon approval by the Santa Clara Valley Water District and/or other agencies with jurisdiction.
- **Product Specification:**

Restrooms

- Locate near trailheads, staging areas, and parking locations.
- Should be in highly visible areas to increase the perception of safety.
- Should use a maze-type entry system, or doors placed in a locked open position will also increase convenience and safety. With this type of entry/exit setup, users may determine who is in the restroom by glancing around the corner.
- A single occupancy sized portable toilets or permanent structure should be considered.
- A phone number for maintenance concerns about the restroom should be clearly posted.
- Inset doorways, alcoves, and above or below grade entrances should be well lit.

Signage

Signage plays an important role in trail design. It gives directions and needed information along trails.

- Post warning signs as necessary (Bobcats, Mountain Lions, etc.)
- All bridge crossings should include a sign identifying the street name.
- Directional signs should indicate the location of population centers.
- Post Adopt-A-Trail signs at trailheads when an area is within the program limits.

Signage: Mileage Markers

- Mileage markers should identify regular points along the trail and be coded to the Police Department's GIS system. This will enable emergency personnel to respond more rapidly in the event of a medical or other type of emergency on the trail.
- Installation of mileage markers shall be in compliance with the City's Mileage Marker Feasibility Study (posted on the Trail Program website).

Signage: Interpretive

- Provide immediate access to interpretive stations along the trail.
- Stations can address the following subject matter:
 - Education, riparian or site-relevant subject material.
 - Historical; persons, places, or events
 - Environmental; site specific issues

Signage: ITS

- Development and/or operation of special event centers that require the period closure of a primary trail justifies the need for changeable message signage.
- Signage will be linked to San José's Signal Central and display notices of closures or detours in compliance with the Trail Closure Policy.

Signage: Warning

Striping

- Install reflective pavement markings that address **Police Department Air Support** needs. Refer to California, Department of Transportation Specification No. 8010-004.
- Install center lane striping (broken yellow) to divide opposing traffic.
- Install center lane striping (solid yellow) at points where passing may be less than safe.
- Install shoulder striping (solid white) only when proximity to trail edge may present a less than safe condition.
- Identify emergency vehicle access points with reference data provided to the Police Department's GIS group, photographs of the site should be provided.

Striping	Placement
Yellow, centerline broken striping	Along segments of trail with good visibility
Yellow, centerline solid stripe	Along segments with limited visibility and at bollards
White, solid shoulder striping	Only if sharp drop-off adjacent to trail surface
Stop Bar	At trail heads with associated pavement message and “Stop” signage

Parking Facilities

- Parking areas shall be located to maximize natural surveillance from adjacent roads, businesses, etc.
- Parking shall be provided when little or no on-street parking can be found in the immediate area.

Public Art

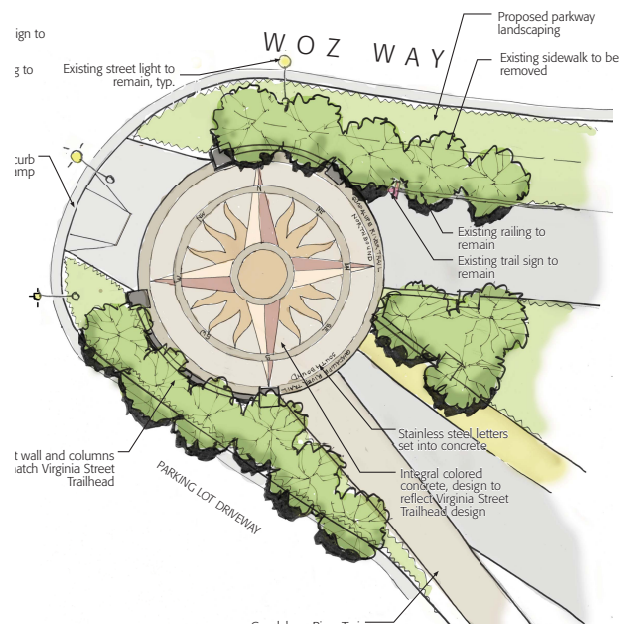
- Refer to Public Art master plan.
- Include art in all trail projects with a budget of over \$100,000.
- Allocate 2% of project budget to art program.

Trailhead

The trailhead plays an important role in welcoming trail users and identifying the facility for people traveling along the nearby roadway.

The trailhead should include at a minimum, the following elements:

- Trail Rules sign
- Mutt mitt
- Trash Receptacle
- Bench
- Trail system map (optional)
- Bollard(s)
- Gateway (optional)
- Call Box (optional)
- Compass medallion design (see graphic)



Resources:

FHWA Equestrian Guidelines

- www.fhwa.dot.gov/environment/fspubs/07232816/toc.htm
- www.fhwa.dot.gov/environment/rectrails/ Recreational Trails Program
- www.fhwa.dot.gov/environment/te/ Transportation Enhancement Activities
- www.fhwa.dot.gov/environment/bikeped/sec217.htm Federal requirements regarding equestrian and other non-motorized use of projects funded under Section 217 of title 23 of the United States Code